

## Title: RELEASABLE CABLE GRIP

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

[0001] This invention relates generally to the field of cable grips that provide a housing that grips a cable in order to fix the cable in a desired location. More particularly, the cable grip of the present invention is releasable through levers that are fixed to wedges that grip and may release the cable without any special tools.

#### 2. Prior Art

[0002] Cable grips are known in the prior art. Cable grips have been utilized on fencing materials, on various wires, and on metal woven cable in order to fix the position of a housing on the cable and thereby prevent the cable from slipping relative to the housing. Cable grips are not new. In 1931 C.W. Kemper et al. were issued Patent No. 1,811,942 for a cable grip. Facey et al. were issued Patent No. 5,147,145 on September 15, 1992 for Connector for Wires. A more recent example of a cable grip issued to Facey et al. on May 9, 2000, Patent No. 6,058,574, which requires a special tool to release the cable grip when desired. The present invention requires no special tools to release the cable grip when desired.

### BRIEF SUMMARY OF THE INVENTION

[0003] A releasable cable grip for locking a cable within a housing is provided. The housing has a bore through it to receive the cable. A wedge is positioned within the housing and is spring loaded to bias the wedge against the cable within the bore to wedge the cable against

the bore and thereby grip the cable. A release lever is fixed to the wedge and extends through a slot in the housing whereby the lever may be utilized to move the wedge away from the cable to release the cable and permit movement of the cable relative to the bore of the housing.

**[0004]** A releasable cable grip connector for locking a cable segment within a housing and for having a second cable segment pass through the housing is also provided. A housing having a first bore through it receives a first cable segment and a second bore through the housing parallel to the first bore receives a second cable segment. A channel within the body disposed to one side of the first bore and acutely inclined to it, at its inner end, breaks into the first bore. A wedge is positioned within the housing in the channel and is spring loaded to bias the wedge against the cable segment within the first bore to wedge the cable segment against the first bore and thereby grip the cable segment. A slot in the housing extends parallel to the channel and communicates with the channel. A release lever fixed to the wedge extends through the slot to the outside of the housing whereby the release lever may be utilized to move the wedge away from the cable segment and permit movement of the cable segment relative to the first bore.

**[0005]** Accordingly, it is an object of the present invention to provide a releasable cable grip that permits the cable to be released without any special tooling.

**[0006]** Another object of the present invention is to provide a releasable cable grip which may have multiple passages for cable segments.

[0007] Another object of the present invention is to provide a releasable cable grip with levers extending to the outside of the housing to permit release of the cable relative to the housing of the cable grip.

[0008] These and other objects of the present invention will become readily apparent as this description proceeds in conjunction with the accompanying drawings.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0009] Figure 1 is a perspective view of the housing of a releasable cable grip of the present invention.

[0010] Figure 2 is a longitudinal sectional view of the housing of Figure 1.

[0011] Figure 3 is a sectional view similar to Figure 2 showing the wedge and spring in place within the housing.

[0012] Figure 4 is a sectional view similar to Figures 2 and 3 showing a cable through the cable grip being gripped by the wedge.

[0013] Figure 5 is a sectional view of another embodiment of the present invention showing a cable grip with two cable securing bores.

**[0014]** Figure 6 is a sectional view of another embodiment of the present invention showing a cable grip with two securing bores and having the wedges being urged to the external walls of the cable grip housing.

**[0015]** Figure 7 is a perspective view of the housing of another embodiment of the present invention.

**[0016]** Figure 8 is a longitudinal section of the cable grip of Figure 7 showing the wedges and springs that are internal to the cable grip.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

**[0017]** Referring to Figures 1 – 4 there is indicated generally at 10 a cable grip that has a housing 12 with cable receiving bores 14 and 14a. Release levers 16 protrude through slots 18 in the housing 12 and extend from each side of wedge 20 to which they are fixed. Spring 22 urges wedge 20 away from spring block 24 that is fixed to housing 12. As shown in Figure 4, a cable 26 is inserted into the bore 14 in the direction of arrow A forcing the wedge 20 against the force of spring 22 while the wedge 20 remains in contact with cable 26. Any effort withdraw the cable 26 in the direction opposite from which it was inserted will result in the wedge 20 bearing against the cable and forcing the cable against the bore 14 of the housing 12. In the present embodiment, bore 14a is a free bore for receiving a cable that is not restrained within the cable housing. In other embodiments to be described, the second bore also has a cable restraining means. To release cable 26 as shown in Figure 4, the levers 16 that extend from wedge 20

through slots 18 on either side of the housing 12 are moved against the spring force 22 to move the wedge 20 away from cable 26. Cable 26 may then be released and adjusted relative to the housing 12 without the use of any special tools or devices to release it.

**[0018]** Figure 5 shows a second embodiment of the present invention that has housing 12 with cable receiving bores 14 and wedges 20 with release levers 16 protruding from the wedges 20 through respective slots 18 in each side of the housing 12. The springs 22 urge the wedges 20 against cables (not shown) that are inserted in the direction of arrows A into each bore 14. In Figure 5, as in the embodiment of Figures 1-4, springs 22 urge the wedges 20 parallel to passages or channels that are acutely inclined to the cable receiving bore 14.

**[0019]** A third embodiment of the invention is shown in Figure 6 in which the wedges 20 are located centrally of the housing 12 and when cables are inserted in the cable receiving bores 14, springs 22 force cables (not shown) outwardly against the outer walls of housing 12 as viewed in Figure 6. Levers 16 that extend from each side of wedges 20 and through slots 18 on each side of housing 12 permit release of cables when the levers 16 are moved against the force of springs 22.

**[0020]** Figures 7 and 8 show a fourth embodiment of the present invention indicated generally at 30. Housing 32 has receiving bores 34. Both of the bores 34 are capable of gripping cables that extend through the bores 34. In this embodiment, release levers 36 extend through slots in the top and bottom of the housing 32 and are fixed to wedges 40. Springs 42 abut against spring block 44 and urge the wedges 40 away from spring blocks 44. Spring blocks 44 are fixed

to housing 32. When it is desired to release cables that extend through cable receiving bores 34, respective levers 36 are utilized to move the wedges against the urging of springs 42 in order to free the cables (not shown).

**[0021]** In accordance with the provisions of the patent statutes, I have described the principle, mode of operation, and the preferred embodiments of my invention. It should be understood that the invention may be practiced otherwise than as specifically illustrated and described herein in accordance with the claims affixed hereto.